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UNITED STATES DISTRICT COURT

DISTRICT OF HAWAII

LUIS SANCHO, WALTER L. WAGNER,)	Civil No. 08-00136-HG-KSC
)	
Plaintiffs,)	FEDERAL DEFENDANTS'
)	DECLARATION OF BRUCE P.
)	STRAUSS IN RESPONSE TO
v.)	AUGUST 5, 2008 AFFIDAVIT OF
)	WALTER L. WAGNER (DKT. NO.
UNITED STATES DEPARTMENT OF)	30) AND IN SUPPORT OF
ENERGY, <i>et al.</i> ,)	FEDERAL DEFENDANTS' JUNE 24,
)	2008 MOTION TO DISMISS (DKT.
Defendants.)	NO. 14)
_____)	

I, Bruce P. Strauss, hereby declare as follows:

1. I am a Program Manager in the Office of High Energy Physics, Office of Science, U.S. Department of Energy ("DOE"). I have served in this position since April 1997. My principal responsibilities include serving as Associate Program Manager for the Large Hadron Collider ("LHC") Accelerator Construction Project and Program Manager for University, Industrial and Intergovernmental Grants. In addition, I have served as the Executive Secretary of the High Energy Physics Advisory Panel, and frequently I serve as a senior member of management and technical review panels both in the United States and overseas. In such capacity I have knowledge of the U.S. participation in the LHC project.

2. I submitted my first declaration in the above-captioned proceeding on June 24, 2008. "Federal Defendants' Declaration of Bruce P. Strauss" (hereinafter, "June 24, 2008 Strauss Decl."), and Attachments 1-17 thereto. Dkt. No. 20. As stated in that declaration, I have been associated with the construction of particle accelerators since 1968 first at the Argonne National Laboratory and then at the Fermi National Laboratory where I was the Assistant Division Director of the Tevatron. From 1978 to 1997 I was in the private sector in the business of superconducting magnets and as a technical and management consultant to private firms and the government. I was trained at the Massachusetts Institute of Technology where I received the BS degree in 1964 and the ScD (PhD) in 1967. I received an MBA from the University of Chicago in 1972 and a

Certificate in Financial Planning from Boston University in 1984. My Curriculum Vitae and list of publications are attached to my June 24, 2008 declaration.

3. I am submitting my present declaration in support of the Federal Defendants' June 24, 2008 "Combined Motion to Dismiss and Motion for Summary Judgment" (Dkt. No. 14), and in response to the August 5, 2008 "Affidavit of Walter L. Wagner in Support of Permanent Injunction Re Defendant CERN" (hereinafter, "August 5, 2008 Wagner Aff.") (Dkt. No. 30).

4. Through my responsibilities as Associate Program Manager for the LHC Construction project at DOE, I have become familiar with the matters in this declaration and can and would testify competently as to them if called as a witness.

5. I and other scientists within DOE's Office of High Energy Physics have reviewed the August 5, 2008 Wagner Affidavit (Dkt. No. 30). In analyzing the assertions in that affidavit, we have found that the affidavit contains numerous inaccurate and misleading statements, which I will describe in this declaration.

6. In Paragraph 2 of the August 5, 2008 Wagner Affidavit, Mr. Wagner alleges that during the period 1973-1975, "searches on my part resulted in the announcement of the discovery of a magnetic monopole in peer-reviewed publications" I have searched the scientific literature using two well-respected public data bases for scientific and

especially high energy physics related literature, SPIRES and Google Scholar,¹ in order to identify any information concerning Mr. Wagner's contribution to particle physics during this or any other period. I discovered nothing that confirms Mr. Wagner's assertion that he discovered the magnetic monopole. The only article discussing magnetic monopoles that mentioned Mr. Wagner during this period was P.B. Price *et al.*, "Evidence for Detection of a Moving Magnetic Monopole," *Physical Review Letters*, **35**, 487 (Aug. 25, 1975) (attached hereto as Attachment 1). Mr. Wagner is not an author of that article; he is only listed in the concluding acknowledgments section of that article, as one of four persons that the authors "thank for assistance." *Id.* at 489.

7. Also in Paragraph 2 of his affidavit, Mr. Wagner states that the discovery of the magnetic monopole "has neither been refuted, nor re-confirmed by additional discovery." From this assertion, Mr. Wagner appears to ask the court to conclude that the magnetic monopole does in fact exist. A survey of the scientific literature shows that this conclusion is without support. On the contrary, a 1983 article in the prestigious journal

¹ The SPIRES data base describes itself as follows:

"The SPIRES-HEP database has been run by the Stanford Linear Accelerator Center (SLAC) since the late 1960's as a database of particle physics literature. SLAC also collaborates with other physics institutions around the world on SPIRES. In 1991 it became the first web-site in North America and now attracts around 50,000 searches per day from particle physicists."

See <http://www.slac.stanford.edu/spires/about/> (last visited August 28, 2008).

The Google Scholar data base describes itself in the following language:

"Google Scholar provides a simple way to broadly search for scholarly literature. From one place, you can search across many disciplines and sources: peer-reviewed papers, theses, books, abstracts and articles, from academic publishers, professional societies, preprint inventories, universities and other scholarly organizations. Google Scholar helps you identify the most relevant research across the world of scholarly research."

Nature, entitled "Magnetic Monopoles," noted the following with respect to the 1975 article by P.B. Price et al. in Attachment 1:

"In 1975 one event in a high altitude balloon experiment was claimed to have been produced by the passage of a monopole. Its interpretation was quickly challenged on the grounds of experimental problems, incompatibilities with other work, and possibilities for a less exotic cause."

R. Carrigan et al., "Magnetic Monopoles," *Nature*, **305**, page 673, (Oct. 20, 1983) (attached hereto as Attachment 2). In addition to that article in *Nature*, we have found no less than five scientific papers that question or refute the results of the 1975 article by P.B. Price et al.:

(1) M.W. Friedlander, "Comments on the Reported Observation of a Monopole," *Physical Review Letters*, **35**, 1167 (Oct. 27, 1975) (Attachment 3 hereto);

(2) E.V. Hungerford, "Comment on the Observation of a Moving Magnetic Monopole," *Physical Review Letters*, **35**, 1303 (Nov. 10, 1975) (Attachment 4 hereto);

(3) R.L. Fleischer et al., "Probabilities for an Alternative Explanation of the Moving Magnetic Monopole," *Physical Review Letters*, **35**, 1412 (Nov. 24, 1975) (Attachment 5 hereto);

(4) J. Cornwall et al., "Relation between Monopole Mass and Primary Monopole Flux," *Physical Review Letters*, **36**, 900 (Apr. 12, 1976) (Attachment 6); and

See <http://scholar.google.com/intl/en/scholar/about.html> (last visited August 28, 2008).

(5) P.B. Price et al., “Further measurements and reassessment of the magnetic-monopole candidate,” *Physical Review D*, **18**, 1382 (Sept. 1, 1978) (Attachment 7 hereto).

8. The most compelling of the five papers noted above is the fifth paper, by the authors of the original 1975 paper by P.B. Price et al., in which they retract their 1975 claim of the monopole based on re-analysis and additional measurement of their data sample. See Attachment 7 at page 1418 where the authors state, “A monopole is incompatible with the data.” This fifth paper identifies Mr. Wagner as a technician who was involved in taking the 1975 data:

“It was thus completely unexpected when a technician, Walter Wagner, found that the track etch rates in the Lexan sheets indicated that it was an extremely heavy, penetrating particle with apparently no change in ionization rate with depth.”

“The erroneous identification of this particle as a monopole came about as follows.”

Attachment 7 at 1385 (emphasis added).

9. In Paragraph 3 of the August 5, 2008 Wagner Affidavit, Mr. Wagner claims to “remain active in astrophysics and cosmology research, and continue membership in the Health Physics Society and Society of Nuclear Medicine.” My search of the two principal public scientific data bases (SPIRES and Google Scholar) for materials dating back to the early 1970s, reveals no listings of Mr. Wagner as an author of any paper published in reputable peer reviewed journals in these fields of endeavor or any other

field of endeavor. Further, I contacted the headquarters of the Health Physics Society, which then checked the membership data base of that organization and informed me that no current membership listing was found for Mr. Wagner. Further, I checked with the membership application web pages of the Health Physics Society and the Society of Nuclear Medicine, which indicated that there is no requirement that a member of either society be competent in the field of High Energy Physics.²

10. The assertions in Mr. Wagner's affidavits require competency in the field of High Energy Physics, not Health Physics or Nuclear Medicine. Practicing high energy physicists most typically possess a Ph.D. or equivalent that requires at least four years and typically seven years to complete beyond the Bachelors degree. A detailed research thesis is required for the Ph.D. Most physicists take additional training beyond the Ph.D. As a result of this extensive training they are able and qualified to analyze data from experiments. It is most rare that a technician or graduate student is included as an author of a published paper unless he or she contributed significant efforts on the experiment or analysis.

11. In Paragraphs 4 and 5 of the August 5, 2008 Wagner Affidavit, Mr. Wagner is mistaken in his allegations that "someone is lying, or deliberately misrepresenting the facts, with regard to the false assertions made by the government defendants that no further funding for the LHC is being made or planned, and that funding has been

² The official web sites for these organizations are: Health Physics Society (<http://www.hps.org>) and Society of Nuclear Medicine (<http://www.snm.org>).

completed”; and that “the government defendants are attempting to work a fraud upon this Court in seeking to lead it to believe that all funding has been completed.” Mr. Wagner fails to understand the difference between LHC construction, and LHC research operations. Regarding LHC construction, as explained in the June 24, 2008 Strauss Declaration ¶¶ 14-23, the U.S. contributions to construction of the LHC machine and the two detectors are now complete. The DOE Critical Decision 4B (CD-4B), formally closing out the U.S. efforts on the construction of the LHC machine as well as the two detectors, occurred on June 25, 2008. See CRITICAL DECISION 4B, signed by the DOE Undersecretary for Science, Dr. Raymond Orbach (Attachment 8 hereto). Transfer of title for of all DOE accelerator components to CERN was completed on September 18, 2007. See June 24, 2008 Strauss Decl. ¶ 22. Regarding LHC research operations, as explained in the June 24, 2008 Strauss Declaration ¶¶ 24-27, DOE’s Office of High Energy Physics plans to provide financial assistance to scientists from U.S. universities and laboratories to conduct high energy physics research with the ATLAS and CMS detectors. The amounts listed for FY2007, FY2008, and beyond are in support of the scientists taking data on the CMS and ATLAS detectors, as well as for support of next generation accelerator technology that is done domestically. Although the U.S. and other international and non-federally-financed researchers will conduct experiments, CERN will be solely responsible for providing, controlling, and scheduling the use of the particle beams necessary for LHC collisions to occur. See June 24, 2008 Strauss Decl. ¶ 26. The impact of halting U.S. DOE-funded activities at CERN would be about US\$10,000,000 per month of inactivity. See June 24, 2008 Strauss Decl. ¶ 27.

12. In Paragraphs 6 and 7 of his affidavit, Mr. Wagner quotes from portions of the International Co-operation Agreement between CERN, DOE, and the National Science Foundation (“NSF”) (Attachment 4 to the June 24, 2008 Strauss Declaration) in attempting to show that “the U.S. government is a partner in the CERN alliance of member states.” On the contrary, the United States is not a “member” of CERN, but is only an “observer.” All of CERN’s 20 member states are European countries. See June 24, 2008 Strauss Decl. ¶ 5. Under the International Co-operation Agreement, which sets forth the terms of U.S. participation in the LHC, the United States has been accorded “observer” status in CERN’s governing council; as an “observer,” the United States has no decision-making authority in CERN, but is permitted to attend certain Council meetings and to receive Council documents. The United States has no role in making financial, policy, or management decisions at CERN. See June 24, 2008 Strauss Decl. ¶¶ 12-13; June 24, 2008 Strauss Decl. Attach. 4 at 3 (§§ 1.8, 1.9), 6 (§ 10.4). Section 1.9 of the International Co-operations Agreement defines “Observer in Council” as:

A special non-voting status for States which are not members of CERN, which is unilaterally granted by CERN’s Council to an individual State, allowing its accredited representatives to attend Open Council sessions”

June 24, 2008 Strauss Decl. Attach. 4 at 3 (§ 1.9). While the U.S. receives information and can monitor progress and participate only in those limited discussions regarding major decisions which will impact the U.S. contributions to construction or research, it has no vote or fiscal responsibility for the operation of the CERN laboratory or the LHC. With respect to section 7.4 of the International Agreement, the two detectors are not CERN property, but are the property of the two individual international scientific

collaborations. The operation of the detectors is the responsibility of those collaborations. Those collaborations have no fiscal responsibility for the operation of the LHC itself.

13. In Paragraphs 8 through 12, Mr. Wagner criticizes the Federal Defendants' use of the word "speculative." Although I used the word "speculative" four times in my first declaration; I used it only when referring to unproven models or theories. I never used it when referring to plaintiffs' concerns. When referring to plaintiffs' concerns, I used the following descriptive terms: "firmly excluded by existing empirical evidence, compelling theoretical arguments, or both" [June 24, 2008 Strauss Decl. ¶ 29]; "no basis for any conceivable threat" [*id.* ¶ 30]; "no basis for any concerns about the consequences of new particles or forms of matter that could possibly be produced by the LHC" [*id.* ¶¶ 31, 32]; "unfounded" [*id.* ¶¶ 33-36]; "neither accepted by the scientific community, nor have they been published in scholarly peer-reviewed journals" [*id.* ¶ 34]; "not based on rigorous scientific analysis" [*id.* ¶ 34]; "does not present a conceivable risk" [*id.* ¶ 40]; and "harmless" [*id.* ¶ 43]. The above-cited paragraphs in my first declaration provide support for those descriptive terms.

14. In Paragraphs 13 and 14 of the August 5, 2008 Wagner Affidavit, Mr. Wagner alleges that he pointed out "errors" to CERN in 2007, and that the 2008 "LSAG Report acknowledges that I and my associates were correct in our previous criticisms of previous safety studies." Those allegations are false: The LSAG report (Attachment 15 to the June 24, 2008 Strauss Decl.) does not acknowledge Mr. Wagner or his associates, and does not acknowledge that any of their previous criticisms were correct or that they

pointed out errors in previous safety studies. Mr. Wagner fails to cite to any specific pages of the LSAG Report that would support his false assertions.

15. In Paragraph 15, Mr. Wagner asserts that since the LSAG report authors have affiliations with CERN, the “lack of independence” causes the report to “overlook scenarios that independent scientists would examine”. In fact, as explained in my first declaration, the LSAG report was externally reviewed prior to its release. It was reviewed by the Scientific Policy Committee (“SPC”), an external scientific advisory group that is composed of many renowned physicists not affiliated with CERN. See June 24, 2008 Strauss Decl. ¶ 32. The SPC panel, including one Nobel Laureate, concluded, “we fully endorse the conclusions of the LSAG report”. SPC Report On LSAG Documents (June 24, 2008 Strauss Decl., Attach. 16) at 4. In addition, the Executive Committee of the Division of Particles and Fields (“DPF”) of the American Physical Society (“APS”), a 42,000-member organization covering all physics disciplines, has issued a statement concurring with the findings of the LSAG report:

“Soon the Large Hadron Collider at CERN will collide protons at energies never before achieved in the laboratory. This has raised concerns in some quarters that new particles created in these collisions might cause serious damage to our planet. In fact, this question has been addressed in the “Review of the Safety of LHC Collisions” issued recently by the LHC Safety Assessment Group. This report explains why there is nothing to fear from particles created at the LHC. In fact, collisions just like those the LHC will make have been produced by cosmic rays bombarding the

earth throughout its existence. It would take about 100,000 LHC experiments to match the number of cosmic ray events that have already occurred. We can rest assured that our planet will not be affected by the four experiments about to be conducted in Geneva.”

The above statement can be found at:

http://www.aps.org/units/dpf/governance/reports/upload/lhc_saftey_statement.pdf

(last visited August 28, 2008).

16. In Paragraph 16 of his affidavit, Mr. Wagner asserts that “The LSAG report acknowledges that the previous cosmic ray argument, used previously by CERN in support of safety, was faulty and erroneous.” That assertion is false. In fact, the first two sentences of the LSAG report state:

“The safety of collisions at the Large Hadron Collider (LHC) was studied in 2003 by the LHC Safety Study Group, who concluded that they presented no danger. Here we review their 2003 analysis in light of additional experimental results and theoretical understandings, which enable us to confirm, update and extend the conclusions of the LHC Safety Study Group.”

June 24, 2008 Strauss Decl., Attach. 15 at 1. Thus, the 2008 LSAG report confirms, updates, and extends the conclusions of the 2003 LHC safety report, which includes the cosmic ray arguments. June 24, 2008 Strauss Decl., Attach. 14 at 4-5 Nowhere in the LSAG report does it say that the cosmic ray argument is faulty and erroneous, as Mr. Wagner asserts. In fact, the report extends and updates the original arguments with

empirical evidence gleaned from astronomical observations and additional detailed calculations. This work, cited by the LSAG report, was peer-reviewed and published in a scholarly physics journal. S.Giddings et al., "Astrophysical implications of hypothetical stable TeV-scale black holes", *Physical Review D* **78**, 035009-1 (2008) (Attachment 9 hereto). This publication, cited by the LSAG report, concludes with the following statement:

"Indeed, conservative arguments based on detailed calculations and the best-available scientific knowledge, including solid astronomical data, conclude, from multiple perspectives, that there is no risk of any significance whatsoever from such black holes."

Attach. 9 at 035009-27 (cited in June 24, 2008 Strauss Decl, Attach. 15 at 3, 14).

17. In Paragraph 17, Mr. Wagner alleges: "It is not known how many strange quarks would have to be generated in order to produce the stability necessary to create this new kind of atomic nucleus [strangelet], but it is believed that the LHC might achieve what lower-energy accelerators have not done, and thus numerous proposed searches for strangelets are published in the scientific literature and are proposed for the LHC." In fact, the opposite of what Mr. Wagner claims is true. An addendum [http://lsag.web.cern.ch/lsag/LSAG-Report_add.pdf] to the LSAG report states:

"As a consequence, strangelet production at the LHC is less likely than at RHIC, just like it was less likely at RHIC than in the heavy-ion programs at lower center-of-mass energies pursued in the 1980's and 1990's."

Therefore, the hypothetical strangelets are less likely to be produced at the

LHC than at other scientific facilities that have been operating safely since the 1980's.

See First Strauss Decl. ¶¶ 35-37

18. In Paragraph 18 of the August 5, 2008 Wagner Affidavit, Mr. Wagner claims: "However, what is new is that the LHC will have far more energy available for strange quark production than anything ever done before, by about one-hundred fold compared to the RHIC and Fermilab's Tevatron." These claims by Mr. Wagner are wrong. The LHC is about thirty times more energetic than RHIC and about seven times more energetic than the Tevatron. In addition, even if strangelets were to exist, collisions at the LHC would be less likely to produce them than the lower-energy collisions already carried out in recent years at RHIC and at the Tevatron. See June 24, 2008 Strauss Decl. ¶ 37.

19. In Paragraphs 19-23 of his affidavit, Mr. Wagner expounds on his personal belief that strangelets will be produced at the LHC and that "Such strangelets would be almost certainly extremely dangerous" (August 5, 2008 Wagner Aff. ¶ 21). First, as explained above in this declaration, and in Paragraphs 35-37 of my first declaration, the existence of strangelets has never been proven. They would be more likely produced at the currently operating RHIC collider in Long Island, NY, where they have never been produced, or detected.. Second, Mr. Wagner's allegation that, if produced, the hypothetical strangelets would be "almost certainly extremely dangerous" is baseless and not grounded in any scientific theory or model.

20. In Paragraphs 24-26, Mr. Wagner refers to conclusions in the LSAG report updating and strengthening previous findings that hypothetical micro-black holes, if they were to be produced, would be safe; Mr. Wagner asserts that “the argument is faulty from several points of view” (August 5, 2008 Wagner Aff. ¶ 25). Mr. Wagner then asserts that his associates are preparing to publish an article discussing these alleged “faults”. Id. ¶

26. I point out that no such article has yet been published, much less peer reviewed and published in a scholarly high energy physics journal.

21. In Paragraph 27 of the August 5, 2008 Wagner Affidavit, Mr. Wagner alleges: “There are methods that could be employed to overcome the invalidities of the current LSAG report that we have pointed out.” As I have pointed out in the preceding paragraphs of this declaration, and also in my first declaration, the premise of this statement by Mr. Wagner is false. There are no serious “invalidities” that have been pointed out about the LSAG report in any scholarly journal or venue. The conclusions of the LSAG report have been endorsed by the American Physical Society, which represents more than 42,000 physicists in many disciplines, by a number of committees external to CERN, and have been published in a peer reviewed journal. Mr. Wagner also asserts in his Paragraph 27, referring to Hawking radiation, that “If this could be proven to be real, rather than mere speculation by the government defendants, then we would know that micro black holes rapidly evaporate, as now speculated by the government defendants, rather than remain stable, as speculated by other physics theories.” First, as explained in my first declaration at Paragraph 41, even if hypothetical micro black holes were to be produced at the LHC, the physical laws that govern their hypothetical creation would

govern their rapid decay through Hawking radiation. Second, scenarios with stable black holes, as my declaration states in paragraph 41, would violate basic principles of physics. See June 24, 2008 Strauss Decl. ¶ 41. Mr. Wagner's claim that micro black holes could be "stable, as speculated by other physics theories" is not based on sound scientific principles, does not identify a scholarly-produced theory, and is thus baseless. See id. ¶¶ 38-41.

22. In Paragraphs 28-29, Mr. Wagner proposes that detectors should be placed on the moon in order to detect Hawking radiation from hypothetical micro black holes or hypothetical strangelets. Mr. Wagner then argues that, if detected, it would be proof that production at the LHC of micro black holes and/or strangelets would be safe. As I explained above, and in my first declaration at Paragraphs 35-37, if the hypothesized strangelets existed in nature, in all likelihood they would have already been produced at RHIC or at other similar facilities that have operated since the 1980's. There is therefore no danger from the production of the hypothetical strangelets at the LHC. Because particle physicists regard micro black holes and strangelets as highly speculative phenomena, Mr. Wagner is not persuasive when he demands positive proof of their existence so that we can be sure they are safe.

23. In Paragraph 29 of his declaration, Mr. Wagner states "there are in fact active searches for strangelets planned at the LHC as shown by numerous articles I've read by the scientists engaged in the detector designs for strangelet detection." Mr. Wagner fails to cite the "numerous articles" he has read on the subject.

25. In Paragraph 30, Mr. Wagner asserts that “until we obtain such empirical evidence, whether from the GLAST satellite, or from new experiments not yet designed to obtain it, it is pure speculation on the part of the government defendants that creation of micro black holes is a safe thing to do, or that creation of this new type of a more stable atomic nucleus, a strangelet, is a safe thing to do”. This assertion by Mr. Wagner is flawed and ignores years of particle physics research and widely accepted theories. If micro black holes and strangelets existed, they would have been produced in the universe via high energy cosmic rays. As the LSAG report pointed out, astronomical observations show that these phenomena, if real, have no catastrophic consequences. See June 24, 2008 Strauss Decl. ¶ 33. In addition, strangelets would have already been produced at RHIC or at previous facilities. See id. ¶¶ 35-37. These are all deductions based on solid empirical observations and sound scientific theory. The existence of micro black holes and strangelets is highly speculative and has never been proven; if any of these hypothetical particles were to exist, the remote possibility of their production at the LHC would be entirely safe. This conclusion is based on numerous studies based on solid empirical evidence and well established scientific principles. See id. ¶¶ 35-41.

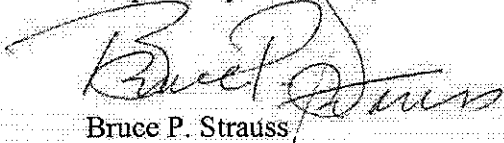
26. In Paragraph 32 of his affidavit, Mr. Wagner alleges that “the LHC is essentially a factory that is designed to create new types of matter that have never before existed on Earth”. He then goes on to classify this matter as “waste product” if it does not spontaneously decay and to decry the hypothetical contamination of his environment in Hawaii with such hypothetical waste product. Mr. Wagner’s concerns are unwarranted,

as explained in my first declaration in Paragraphs 28-43, and in the scientific reports attached thereto. The 2008 LSAG report, after analyzing hypothetical micro black holes and hypothetical strangelets, concluded, "There is no basis for any concerns about the consequences of new particles or forms of matter that could possibly be produced by the LHC." June 24, 2008 Strauss Decl., Attach. 15 at 14. It concluded that stable and neutral black holes are "excluded;" and that the previous arguments in the 2003 LHC safety report about "the impossibility to produce strangelets at the LHC are confirmed and reinforced by the analysis of the RHIC data." Id.

I declare under penalty of perjury that the foregoing is true and correct.

Dated this 28th day of August 2008.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Bruce P. Strauss", is written over the printed name.

Bruce P. Strauss

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on August 29, 2008, true and correct copies of the foregoing were served on the following individuals by United States mail, firstclass postage prepaid:

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